

## Virginia Consumers' Acceptance of Distributed Generation: Environmental Aspects

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### Introduction

Virginians are concerned about the environment and express a willingness to change behavior and to some extent pay more to protect the environment. A multidisciplinary research project funded by the National Science Foundation and the Navy's ONR Science and Technology Office, focuses on the security and efficiency of distributed generation systems. It was found that although Virginia consumers do not know much about distributed generation of electricity they believe it has environmental benefits.

### Methodology

A telephone survey of 600 randomly selected adult Virginia consumers. It was conducted by the Virginia Tech Center for Survey Research between September 20, 2006 and November 2, 2006 on.

### Demographic Characteristics of Respondents

- 53 mean age
- 40% male and 60% female
- 27% have a high school diploma or less; 17% attended or graduated from a technical or community college; and 44% earned a 4 year college diploma or more
- 39% have household income less than \$60,000; 52% have household income of \$60,000 or more; and 10% don't know or gave no answer

### Consumer Environmental Concern About DG in Their Neighborhood

- 86.3% are concerned about pollution, such as exhaust from the system
- 66.4% are concerned about needing more power lines in their neighborhood
- 81.4% are concerned about the impact on wildlife and the environment



Courtesy of Aaron Barr

### Consumer Willingness to Take Action

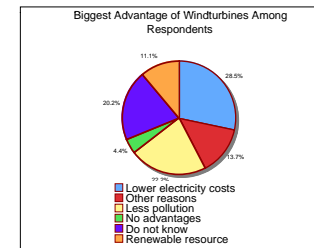
- 85.2% are willing to pay more if there would be less pollution
- 80.5% would be willing to run major appliances at off-peak times to save money

### What is Distributed Generation?

32% of Virginians said they had "no idea", 9% said "Putting large equipment away from people", 28% knew it is "Putting small equipment near where electricity is needed"

### Consumer Acceptance of Renewable DG Technologies

- 87% believe we should find alternatives to gas, oil, or coal
- 90.5% agree that their electric company should use some renewable resources in generating electricity



- 34.4% believe the biggest disadvantage of wind turbines is the unattractiveness
- 68.5% are supportive of wind turbines generating electricity in their neighborhood.
- 85.3% are supportive of solar panels generating electricity in their neighborhood